Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims

Claims 1-19 – (canceled)

20. (currently amended): A method of recording record information onto information record medium, said information record medium comprising: an information record track formed on said information record medium, for recording said record information; and pre-information which includes address information indicating a position on said information record medium, recorded on said information record medium ~~at an interval corresponding to a length of a pre-information unit equal to an N (N: predetermined integer not less than 2) multiple of a length of a record information unit of said record information~~ as an even pre-information or an odd pre-information in each at least one record information unit for record information, wherein said even pre-information and said odd pre-information are recorded by different patterns,

said method comprising:

a detecting process of detecting said pre-information recorded on said information record medium;

a generating process of generating said record information which includes a synchronization signal added to each record information unit in correspondence with said detected pre-information; and

a recording process of recording said generated record information onto said information record track.

21. (previously presented): A method according to claim 20, wherein

in said recording process, said synchronization signal in said record information is recorded to a position adjacent to said pre-information.

22. (previously presented): A method according to claim 20, wherein

said record information unit is a synchronization frame,

said pre-information is recorded for each pre-information unit doubled said synchronization frame, and

said method further comprises a determining process of determining an address where said record information is to be recorded based on said pre-information.

23. (previously presented): A method according to claim 20, wherein

said pre-information includes synchronization pre-information and data pre-information, and

said synchronization pre-information corresponds to a head portion of a sector including a plurality of said record information units.

24. (previously presented): A method according to claim 20, wherein

said pre-information is recorded to a guide track for guiding a light beam, which records said record information, to said information record track, and

said pre-information is detected by a light beam emitted so that a center thereof is located on a center of said information record track.

25. (currently amended): An information recording apparatus of recording record information onto information record medium, said information record medium comprising: an information record track formed on said information record medium, for recording said record information; and pre-information which includes address information indicating a position on said information record medium, recorded on said information record medium ~~at an interval corresponding to a length of a pre-information unit equal to an N (N: predetermined integer not less than 2) multiple of a length of a record information unit of said record information~~ as an even pre-information or an odd pre-information in each of at least one record information unit for record information, wherein said even pre-information and said odd pre-information are recorded by different patterns,

said information record apparatus comprising:

a detecting device which detects said pre-information recorded on said information record medium;

a generating device which generates said record information which includes a synchronization signal added to each record information unit in **[[a]]** correspondence with said detected pre-information; and

a recording device which records said generated record information onto said information record track.

26. (currently amended): An information recording apparatus according to claim [[20]] 25, wherein

said recording device records said synchronization signal in said record information to a position adjacent to said pre-information.

27. (currently amended): An information recording apparatus according to claim [[20]] 25, wherein

said record information unit is a synchronization frame,

said pre-information is recorded for each pre-information unit doubled said one synchronization frame,

said apparatus further comprises a determining device which determines an address where said record information is to be recorded based on said pre-information.

28. (currently amended): An information recording apparatus according to claim [[20]] 25, wherein

said pre-information includes synchronization pre-information and data pre-information, and

said synchronization pre-information corresponds to a head portion of a sector including a plurality of record information units.

29. (currently amended): An information recording apparatus according to claim [[20]] 25, wherein

said pre-information is recorded to a guide track for guiding a light beam, which records said record information, to said information record track, and

said pre-information is detected by a light beam emitted so that a center thereof is located on a center of said information record track.

30. (new) An information record medium, on which record information is able to be recorded, comprising:

an information record track formed on said information record medium, for recording record information;

and pre-information which includes address information indicating a position on said information record medium, recorded on said information record medium as an even pre-information or an odd pre-information in each at least one synchronization frame for record information,

wherein said even pre-information and said odd pre-information are recorded by different patterns;

said even pre-information is located according to even number synchronization frame in said synchronization frame;

said odd pre-information is located according to odd number synchronization frame in said synchronization frame;

even number synchronization frames and odd number synchronization frames are located alternatively;

one recording sector comprises 26 synchronization frames; and

one error correcting code block comprises 16 recording sectors.

31. (new) An information record medium according to claim 30,

wherein, said even pre-information and said odd pre-information are recorded on offset positions to the information record track.